

Jury's out on omega-3 for depression?

14/02/2007 - **For those not joining in the Valentine's Day festivities, boosting omega-3 intake to ward off the possibilities of depression may be slightly premature, suggests a review.**

Despite a growing number of observational studies and uncontrolled trials reporting the benefits of fish oils and [omega-3](#) fatty acids [DHA](#) and EPA on the behaviour and learning, especially in kids, as well for improving the symptoms of [depression](#), the science is not there, says the DTB.

"Despite observational evidence linking depression with reduced intake of long-chain omega-3 fatty acids, there is no convincing basis for using these nutrients as a [means of alleviating] the condition," states the DTB.

The review also states that, when used in combination with antidepressant drugs, there is also only limited evidence.

Omega-3 are polyunsaturated fatty acids (PUFAs) consumed predominantly in the diet from fish, nuts and seeds. The fish oil PUFAs include eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). EPA is proposed to function by increasing blood flow in the body. It is also suggested to affect hormones and the immune system, both of which have a direct effect on brain function. DHA, on the other hand, is involved in the membrane of ion channels in the brain, making it easier for them to change shape and transmit electrical signals.

After reviewing a number of randomised, double-blind, placebo-controlled trials using EPA, DHA or both, the DTB states that, while some studies reported positive effects, other reported no difference between the fish oil supplements and placebo for improving depression.

Two meta-analyses combining results of trials of fish oils in adults both reported positive relationships. *"However, as the authors of both reviews point out, there is significant heterogeneity among the trials, and this undermines the reliability of the combined results."*

From a safety point of view, the reviewers report that there are no issues of safety and tolerability for the supplements.

"There have been concerns that fish oil supplements may be contaminated with dioxins, dioxin-like polychlorinated biphenyls (PCBs) and/or mercury. However, surveys of fish supplements by the Food Standards Agency have found that the levels of mercury they contain do not pose a risk to consumer safety," they stated.

Indeed, most extracted fish oils are molecularly distilled and steam deodorised to remove contaminants and many consider them to be significantly safer sources of omega-3s than fish.

Moreover, fears about dwindling fish stocks have pushed some industries to start extracting omega-3s from algae. Indeed, companies such as Martek Biosciences and Lonza are already offering algae-derived omega-3 DHA as a dietary supplement.

Despite the need for further research to support or refute the link between omega-3 fatty acids and improved mood, a significant body of research have linked the fatty acids to a wide-range of health benefits, including cardiovascular disease (CVD), good development of a baby during pregnancy, joint health, and certain cancers.